



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Patent Application of

SKOGERBØ

Atty. Ref.: 2810-43

Serial No. 10/565,436

TC/A.U.: 3671

Filed: January 20, 2006

Examiner: Beach

For: ANTI-COLLISION SYSTEM

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November 2, 2009

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF UNDER 37 CFR §41.41

Sir:

Applicant submits herewith their Reply Brief in response to the new points of argument raised by the Examiner in the Examiner's Answer of September 3, 2009.

In section (9) of the Examiner's Answer, "Grounds of Rejection", page 4, lines 16-19 and page 5, lines 14-18, the Examiner references Zones 1-3 as defined at column 4, line 60 – column 5, line 4 of Lamb as allegedly teaching a critical distance dependent on the relative movement between the objects. Applicant respectfully challenges the Examiner's characterization of this passage of Lamb.

Lamb discloses that at least one rectangular envelope is created around each major machine part whereby the envelopes form boundaries of exclusion zones for the machine parts (column 4, lines 42-49). Figure 4 is characterized as illustrating such envelopes, i.e. exclusion zones, for a machine where there are three envelopes (Zones 1, 2 and 3) (column 4, lines 50-54). The passage cited by the Examiner at column 4, line 60 – column 5, line 4 advises that the sizes of the three envelopes (Zones 1, 2 and 3) are determined based on normal stopping distance, abnormal stopping distance and

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possible maximum inaccuracy in machine travel position. Apparently, then, Zone 1 is determined based on normal stopping distance, Zone 2 is determined based on abnormal stopping distance and Zone 3 is determined based on possible inaccuracy in machine travel position. As is clear, these zone determinations are made with respect to the individual machine component. Contrary to the Examiner's characterization, these zone determinations are not dependent on relative movement between respective objects.

Lamb goes on to explain, at column 5, lines 37-40 and 42-61, that collision envelopes (zones) are repeatedly compared to detect and determine overlap of the envelopes (zones), and responds to such overlap in the manner described in the paragraphs bridging columns 5 and 6. Specifically, intersection of Zone 1 rectangles provides a warning function, intersection of Zone 2 rectangles results in the system disabling travel and slew in the direction of intrusion on both machines, and Zone 3 intersection results in disabling movement in all directions on both machines.

As is apparent from the foregoing, contrary to the Examiner's characterization of Lamb, the creation of the Zones is not dependent upon relative movement between the objects and thus does not teach or suggest the critical allowed/minimum distance that is defined with the system/method disclosed and claimed by Applicant. Rather, the Lamb "zones" are apparently independently determined for each machine, set in advance and there is no disclosure of that envelope or zone being determined or re-determined based on relative movement. Furthermore and importantly, Lamb's system does not teach or in any way suggest changing at least one of a speed or direction of motion when a distance between the defined geometric shapes "corresponds to said critical allowed distance". Rather, Lamb periodically samples whether envelopes overlap and, when it is discovered that they overlap, takes action. This action is not taken when the distance "corresponds to said critical allowed distance" but rather occurs when it is sampled that the envelopes overlap. Because the sampling is evidently periodic and not continuous, the action or reaction in Lamb does not occur

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when there is a correspondence to the critical allowed distance but rather when the envelopes already overlap. For all of these reasons, Lamb does not anticipate Applicant's claims 1 and 7 under 35 USC 102(e).

In section (10) of the Examiner's Answer, "Response to Argument", the Examiner has included three "Findings of Fact". Applicant respectfully challenges the Examiner's statement of alleged facts and conclusions drawn therefrom. The "facts" alleged by the Examiner in the Response to Arguments are not facts at all. Rather, they are the Examiner's interpretation of Lamb and his (the Examiner's) conclusions based on his interpretation of Lamb.

It is not true that Lamb discloses the claimed element of the critical distance as collision Zones 1, 2 and 3. Those zones as specifically disclosed in Lamb are created independently for each object based on normal stopping distance, abnormal stopping distance and "possible maximum inaccuracy" associated with that particular machine. Each specific zone has nothing to do with relative movement as it is evidently created in advance of utilization of the system. There is no disclosure whatsoever in Lamb of Zones 1, 2 and/or 3 being related to relative movement of the objects, much less that there is a critical allowed/minimum distance that is defined between the objects as claimed.

Furthermore, contrary to the Examiner's alleged fact 2, Lamb does not disclose repeated "comparison of the zones". Rather, Lamb teaches repeated sampling to determine whether zones have overlapped. As such, Lamb teaches a system that continually detects only the absolute position (instantaneous location of the envelopes) of each object and then initiates a warning or stops some or all movement when the detected absolute position indicates overlap of the "zones".

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As is evident from the foregoing, Lamb does not teach or in any way suggest defining a critical distance dependent on relative movement between the respective objects, nor does Lamb teach that when a distance between geometric shapes corresponds to the defined critical allowed distance, at least one of speed or direction of movement of at least one of the objects is changed.

For all the reasons advanced in Applicant's Brief on Appeal and for the further reasons advanced above in Applicant's Reply Brief, reversal of the Examiner's rejections of record is believed to be in order and such action is respectfully requested.

Respectfully submitted,

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